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# UNITED STATES PATENT AND TRADEMARK OFFICE

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/839,135	04/23/2001	Mitsushi Yoshioka	392.1714	1599

21171 7590 10/02/2002

STAAS & HALSEY LLP  
700 11TH STREET, NW  
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WASHINGTON, DC 20001

EXAMINER

LUK, EMMANUEL S

ART UNIT	PAPER NUMBER
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1722

DATE MAILED: 10/02/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

6

**Office Action Summary**

Applicati n N .

09/839,135

Applicant(s)

YOSHIOKA, MITSUSHI

Examiner

Emmanuel S. Luk

Art Unit

1722

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 April 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Specification*

1. The disclosure is objected to because of the following informalities:

On page 7, last line, the term "measuring shat 14", the word "shat" is misspelled and should be corrected to --shaft--.

Appropriate correction is required.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claims 1-8 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shibuya et al in view of Emoto.

Shibuya teaches the claimed apparatus with an outer frame (20) with movable sections (2) and fixed section that is composed of the outer frame, the linear motor is

comprised on the sections and provides linear movement (Fig. 3). This drives the injection screw (Ks), the movable section of each of the linear motors comprises a polygonal prism having a plurality of pairs of plane parallel to each other (Fig. 3, 4). A penetrating hole (Fig. 3) in the movable section allows for a measuring shaft (8) to be placed on the end of the screw. One end of the screw shaft is attached to the moving plate (R) such that it can rotate but cannot move linearly and the movable section of each of the linear motors is fixed to the moving plate via load cell, represented by the pressure endurance mechanism (10).

Shibuya fails to teach linear motors on movable sections and fixed sections of the outer frame.

Emoto teaches an injection molding apparatus having an outer frame (11), the outer frame having movable sections (56) and a fixed section (41) attached to the outside portion of the outer frame, a plurality of stators and rotors are affixed to the movable and fixed sections of the outer frame such that the elements face each other, the outer frame and fixed sections are arranged to surround the screw shaft (63).

It would have been obvious to one ordinary skill in the art to modify Shibuya by placing movable and fixed sections on the outer frame as taught by Emoto because it allows for quick removal and replacement of parts of the linear motor.

5. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shibuya in view of Emoto as applied to claims 1-8 and 11 above, and further in view of Chaya.

Shibuya fails to teach adjustment means.

Chaya teaches a linear motor, wherein a position adjustment means (Fig. 6) adjust the gaps between the magnets (13) and the corresponding inner yokes (12) on which the linear motor magnetic circuit coils (9) arranged on the head carriage (6) are respectively wound and thus maximizing the efficiency of the of magnets (Col. 1, lines 50-52).

It would have been obvious to one of ordinary skill in the art to modify Shibuya with adjustment means as taught by Chaya because it allows for adjusting the gap between parts and thereby improve efficiency of the magnets.

6. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shibuya et al in view of Emoto as applied to claims 1-4, 7, 8 and 11 above, and further in view of Wacker (EP 0744815 A2).

Shibuya fails to teach a linear guide.

Wacker teaches linear motor elements (PM) on a frame (T) that surrounds the element (P), a linear guide is provided at a point in the frame represented at SP.

It would have been obvious to one of ordinary skill in the art to modify Shibuya with a linear guide to the frame as taught by Wacker because it ensures the movable section moves accordingly in the desired direction.

### ***Conclusion***


7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Inaba et al.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emmanuel S. Luk whose telephone number is (703) 305-1558. The examiner can normally be reached on Monday through Friday 8 to 4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jan Silbaugh can be reached on (703) 308-3829. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0651.

E.L.  
September 27, 2002

  
JAN H. SILBAUGH  
SUPERVISORY PATENT EXAMINER  
ART UNIT 1722  
09/27/02